

Name: _____ Date: _____

Polynomial Operations EXAM (version 101)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = -7x^5 - 2x^3 + 10x^2 - 5x + 4$$

$$q(x) = -9x^5 - 3x^4 - 10x^3 - 2x^2 + 6$$

Express the sum of $p(x) + q(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = 6x^2 + 8x + 7$$

$$b(x) = 6x + 3$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^6$ in standard (expanded) form.

Polynomial Operations EXAM (version 101)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= -x^3 + 6x^2 + 13x + 14 \\g(x) &= x - 8\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x - 8}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = -x^3 + 6x^2 + 13x + 14$. Evaluate $f(8)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 102)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = x^5 - 4x^4 - 8x^3 - 10x - 2$$

$$q(x) = 5x^5 - 4x^4 + 8x^2 + x - 6$$

Express the difference $q(x) - p(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = 4x^2 - 3x + 5$$

$$b(x) = 5x - 3$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^6$ in standard (expanded) form.

Polynomial Operations EXAM (version 102)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= 2x^3 + 13x^2 - 23x + 17 \\g(x) &= x + 8\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x+8}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = 2x^3 + 13x^2 - 23x + 17$. Evaluate $f(-8)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 103)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = -9x^5 - 8x^4 + 6x^3 + 10x^2 + 1$$

$$q(x) = -6x^5 - 2x^4 + 7x^3 + 3x - 8$$

Express the sum of $p(x) + q(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = 5x^2 + 8x + 7$$

$$b(x) = 6x - 5$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^5$ in standard (expanded) form.

Polynomial Operations EXAM (version 103)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= 2x^3 + 15x^2 - 27x + 4 \\g(x) &= x + 9\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x + 9}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = 2x^3 + 15x^2 - 27x + 4$. Evaluate $f(-9)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 104)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = 2x^5 + 10x^3 - 9x^2 - 5x - 7$$

$$q(x) = -6x^5 - 3x^4 + 10x^3 + 7x + 1$$

Express the sum of $p(x) + q(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = 9x^2 - 3x + 6$$

$$b(x) = 7x - 3$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^4$ in standard (expanded) form.

Polynomial Operations EXAM (version 104)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= 3x^3 - 25x^2 - 18x - 8 \\g(x) &= x - 9\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x - 9}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = 3x^3 - 25x^2 - 18x - 8$. Evaluate $f(9)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 105)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = 2x^5 + 7x^3 + 10x^2 + 4x - 8$$

$$q(x) = -8x^5 + 9x^4 - 7x^2 - 6x + 5$$

Express the sum of $p(x) + q(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = 4x^2 - 3x + 7$$

$$b(x) = -9x - 4$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^6$ in standard (expanded) form.

Polynomial Operations EXAM (version 105)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= x^3 - 8x^2 + x - 11 \\g(x) &= x - 8\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x - 8}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = x^3 - 8x^2 + x - 11$. Evaluate $f(8)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 106)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = -8x^5 - 4x^3 + x^2 - 2x + 5$$

$$q(x) = 6x^5 + 3x^4 + x^2 - 9x - 8$$

Express the sum of $p(x) + q(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = -5x^2 + 6x + 7$$

$$b(x) = 2x + 8$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^5$ in standard (expanded) form.

Polynomial Operations EXAM (version 106)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= x^3 - 7x^2 - 16x - 19 \\g(x) &= x - 9\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x - 9}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = x^3 - 7x^2 - 16x - 19$. Evaluate $f(9)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 107)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = -2x^5 - 3x^4 + 6x^3 + 10x^2 + 5$$

$$q(x) = -3x^5 - 10x^4 - 9x^3 + 7x - 6$$

Express the sum of $p(x) + q(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = 6x^2 - 7x + 4$$

$$b(x) = -5x - 9$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^5$ in standard (expanded) form.

Polynomial Operations EXAM (version 107)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= 4x^3 - 26x^2 + 13x + 4 \\g(x) &= x - 6\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x - 6}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = 4x^3 - 26x^2 + 13x + 4$. Evaluate $f(6)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 108)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = -7x^5 - 6x^4 + 5x^3 - 8x - 9$$

$$q(x) = 9x^5 - 6x^4 - 4x^2 - 8x - 5$$

Express the difference $p(x) - q(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = 6x^2 - 5x - 9$$

$$b(x) = 2x + 4$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^6$ in standard (expanded) form.

Polynomial Operations EXAM (version 108)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= -3x^3 - 16x^2 + 7x - 25 \\g(x) &= x + 6\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x+6}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = -3x^3 - 16x^2 + 7x - 25$. Evaluate $f(-6)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 109)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = -2x^5 + 5x^3 - 10x^2 - 7x + 4$$

$$q(x) = -5x^5 - 8x^4 + 6x^2 - x - 3$$

Express the difference $q(x) - p(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = 3x^2 - 2x + 7$$

$$b(x) = 8x + 5$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^4$ in standard (expanded) form.

Polynomial Operations EXAM (version 109)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= x^3 + 10x^2 + 19x + 25 \\g(x) &= x + 8\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x+8}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = x^3 + 10x^2 + 19x + 25$. Evaluate $f(-8)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 110)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = -3x^5 + 9x^4 - 8x^3 - 7x^2 + 1$$

$$q(x) = 10x^5 - x^4 - 9x^2 - 5x + 4$$

Express the difference $p(x) - q(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = -7x^2 - 3x + 5$$

$$b(x) = 3x - 4$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^5$ in standard (expanded) form.

Polynomial Operations EXAM (version 110)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= 2x^3 - 19x^2 + 23x + 9 \\g(x) &= x - 8\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x - 8}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = 2x^3 - 19x^2 + 23x + 9$. Evaluate $f(8)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 111)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = -4x^5 + 3x^4 + x^2 - 9x - 5$$

$$q(x) = 10x^5 - 4x^4 + 7x^3 - 2x - 1$$

Express the sum of $p(x) + q(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = 6x^2 + 9x - 7$$

$$b(x) = 5x + 3$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^4$ in standard (expanded) form.

Polynomial Operations EXAM (version 111)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= -3x^3 + 27x^2 - 25x + 1 \\g(x) &= x - 8\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x - 8}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = -3x^3 + 27x^2 - 25x + 1$. Evaluate $f(8)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 112)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = -9x^5 - 6x^4 + 4x^2 - 5x + 3$$

$$q(x) = -2x^5 - 7x^4 - x^3 - 9x^2 - 6$$

Express the difference $q(x) - p(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = 5x^2 - 7x + 3$$

$$b(x) = -3x + 2$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^5$ in standard (expanded) form.

Polynomial Operations EXAM (version 112)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= -x^3 + 6x^2 + 27x + 1 \\g(x) &= x - 9\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x - 9}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = -x^3 + 6x^2 + 27x + 1$. Evaluate $f(9)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 113)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = -2x^5 - x^3 + 6x^2 - 4x - 5$$

$$q(x) = 4x^5 + 2x^4 - 10x^2 - x + 8$$

Express the sum of $p(x) + q(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = 6x^2 + 8x + 3$$

$$b(x) = 3x - 4$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^5$ in standard (expanded) form.

Polynomial Operations EXAM (version 113)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= 3x^3 + 9x^2 - 29x + 8 \\g(x) &= x + 5\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x+5}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = 3x^3 + 9x^2 - 29x + 8$. Evaluate $f(-5)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 114)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = x^5 + 3x^4 - 5x^2 - 7x - 8$$

$$q(x) = -10x^5 + 6x^4 - 2x^3 + 5x^2 + 1$$

Express the difference $q(x) - p(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = -2x^2 - 4x + 3$$

$$b(x) = -4x - 2$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^6$ in standard (expanded) form.

Polynomial Operations EXAM (version 114)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= -4x^3 + 28x^2 + 3x - 11 \\g(x) &= x - 7\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x - 7}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = -4x^3 + 28x^2 + 3x - 11$. Evaluate $f(7)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 115)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = 9x^5 + 2x^4 - 5x^3 + 7x + 8$$

$$q(x) = -10x^5 + 5x^4 - 8x^2 + 4x + 7$$

Express the difference $p(x) - q(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = 2x^2 + 9x - 5$$

$$b(x) = -5x - 2$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^6$ in standard (expanded) form.

Polynomial Operations EXAM (version 115)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= x^3 + 12x^2 + 27x + 3 \\g(x) &= x + 9\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x + 9}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = x^3 + 12x^2 + 27x + 3$. Evaluate $f(-9)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 116)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = 5x^5 - 4x^4 - 10x^3 + 2x - 1$$

$$q(x) = -5x^5 - 7x^4 - 8x^3 + x^2 - 9$$

Express the sum of $p(x) + q(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = 6x^2 - 3x + 2$$

$$b(x) = -5x + 8$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^6$ in standard (expanded) form.

Polynomial Operations EXAM (version 116)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= -2x^3 - 19x^2 - 24x + 2 \\g(x) &= x + 8\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x+8}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = -2x^3 - 19x^2 - 24x + 2$. Evaluate $f(-8)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 117)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = 6x^5 + 7x^4 + 4x^3 - 2x + 1$$

$$q(x) = -x^5 + 5x^4 - 3x^2 - 6x + 2$$

Express the sum of $p(x) + q(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = 3x^2 - 4x - 6$$

$$b(x) = 7x + 3$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^6$ in standard (expanded) form.

Polynomial Operations EXAM (version 117)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= 3x^3 - 28x^2 + 7x + 14 \\g(x) &= x - 9\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x - 9}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = 3x^3 - 28x^2 + 7x + 14$. Evaluate $f(9)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 118)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = x^5 - 9x^4 + 2x^3 - 7x^2 - 5$$

$$q(x) = -5x^5 + 8x^4 - 2x^3 + x + 6$$

Express the difference $q(x) - p(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = 2x^2 + 5x + 8$$

$$b(x) = -4x + 3$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^4$ in standard (expanded) form.

Polynomial Operations EXAM (version 118)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= 7x^3 + 28x^2 + x - 6 \\g(x) &= x + 4\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x+4}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = 7x^3 + 28x^2 + x - 6$. Evaluate $f(-4)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 119)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = -8x^5 + 5x^4 + 9x^3 - 3x^2 - 7$$

$$q(x) = 7x^5 - x^4 + 3x^3 + 9x + 10$$

Express the difference $q(x) - p(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = -6x^2 + 5x - 2$$

$$b(x) = 5x - 3$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^5$ in standard (expanded) form.

Polynomial Operations EXAM (version 119)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= -x^3 + 7x^2 + 3x - 11 \\g(x) &= x - 7\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x - 7}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = -x^3 + 7x^2 + 3x - 11$. Evaluate $f(7)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 120)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = -9x^5 + 7x^3 - 8x^2 - 4x + 2$$

$$q(x) = x^5 - 3x^4 - 9x^3 + 8x + 4$$

Express the difference $p(x) - q(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = 6x^2 - 4x + 8$$

$$b(x) = -4x + 3$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^5$ in standard (expanded) form.

Polynomial Operations EXAM (version 120)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= -5x^3 - 26x^2 + 25x + 5 \\g(x) &= x + 6\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x+6}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = -5x^3 - 26x^2 + 25x + 5$. Evaluate $f(-6)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 121)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = -4x^5 - 9x^4 + 3x^3 - x^2 + 6$$

$$q(x) = -x^5 + 8x^4 + 5x^3 + 7x - 3$$

Express the difference $p(x) - q(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = -3x^2 + 9x - 7$$

$$b(x) = -5x - 6$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^4$ in standard (expanded) form.

Polynomial Operations EXAM (version 121)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= -x^3 + 3x^2 + 28x - 6 \\g(x) &= x - 7\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x - 7}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = -x^3 + 3x^2 + 28x - 6$. Evaluate $f(7)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 122)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = -10x^5 - 7x^4 + x^3 - 9x^2 - 4$$

$$q(x) = 10x^5 - 4x^3 + 6x^2 + 3x - 2$$

Express the sum of $p(x) + q(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = -7x^2 - 2x - 3$$

$$b(x) = -5x + 4$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^4$ in standard (expanded) form.

Polynomial Operations EXAM (version 122)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= -6x^3 + 29x^2 + 4x + 3 \\g(x) &= x - 5\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x - 5}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = -6x^3 + 29x^2 + 4x + 3$. Evaluate $f(5)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 123)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = -3x^5 + 10x^4 + 2x^3 - 6x + 9$$

$$q(x) = -5x^5 - 3x^4 - 9x^3 + x^2 - 7$$

Express the difference $p(x) - q(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = -8x^2 - 3x - 6$$

$$b(x) = -3x + 8$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^4$ in standard (expanded) form.

Polynomial Operations EXAM (version 123)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= 4x^3 - 28x^2 - 29x - 18 \\g(x) &= x - 8\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x - 8}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = 4x^3 - 28x^2 - 29x - 18$. Evaluate $f(8)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 124)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = -10x^5 - 8x^3 + 6x^2 + 9x + 2$$

$$q(x) = 6x^5 - 10x^4 + 2x^3 + 8x - 9$$

Express the difference $q(x) - p(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = 8x^2 - 5x + 9$$

$$b(x) = 7x + 4$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^5$ in standard (expanded) form.

Polynomial Operations EXAM (version 124)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= -3x^3 + 19x^2 - 2x - 26 \\g(x) &= x - 6\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x - 6}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = -3x^3 + 19x^2 - 2x - 26$. Evaluate $f(6)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 125)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = 8x^5 + 10x^4 + x^2 - 7x - 9$$

$$q(x) = -10x^5 - 7x^4 - 5x^3 - 8x^2 - 1$$

Express the difference $p(x) - q(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = 5x^2 + 3x + 6$$

$$b(x) = -2x - 3$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^4$ in standard (expanded) form.

Polynomial Operations EXAM (version 125)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= 2x^3 + 17x^2 + 9x + 15 \\g(x) &= x + 8\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x+8}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = 2x^3 + 17x^2 + 9x + 15$. Evaluate $f(-8)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 126)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = 5x^5 - 7x^4 - 2x^2 + 10x + 4$$

$$q(x) = 10x^5 - 7x^4 - 9x^3 - 8x^2 + 6$$

Express the difference $p(x) - q(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = 5x^2 - 8x + 2$$

$$b(x) = 4x + 8$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^4$ in standard (expanded) form.

Polynomial Operations EXAM (version 126)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= 2x^3 + 17x^2 + 27x - 9 \\g(x) &= x + 6\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x+6}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = 2x^3 + 17x^2 + 27x - 9$. Evaluate $f(-6)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 127)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = -6x^5 + x^3 - 10x^2 - 8x - 7$$

$$q(x) = -2x^5 - 9x^4 - 7x^3 + 10x + 4$$

Express the difference $q(x) - p(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = 6x^2 + 7x - 9$$

$$b(x) = 2x + 5$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^4$ in standard (expanded) form.

Polynomial Operations EXAM (version 127)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= -7x^3 + 28x^2 - 7x + 25 \\g(x) &= x - 4\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x - 4}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = -7x^3 + 28x^2 - 7x + 25$. Evaluate $f(4)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 128)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = x^5 - 2x^4 - 6x^3 + 8x^2 - 5$$

$$q(x) = 8x^5 + 4x^4 - 7x^2 + 9x + 10$$

Express the difference $q(x) - p(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = 4x^2 + 2x + 3$$

$$b(x) = 6x - 5$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^6$ in standard (expanded) form.

Polynomial Operations EXAM (version 128)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= -2x^3 + 15x^2 + 24x + 21 \\g(x) &= x - 9\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x - 9}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = -2x^3 + 15x^2 + 24x + 21$. Evaluate $f(9)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 129)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = -2x^5 - 10x^3 + 8x^2 - 3x - 7$$

$$q(x) = -3x^5 - 2x^4 - 9x^2 - x + 5$$

Express the sum of $p(x) + q(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = -7x^2 + 5x + 2$$

$$b(x) = 4x - 2$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^5$ in standard (expanded) form.

Polynomial Operations EXAM (version 129)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= 8x^3 + 28x^2 - 16x + 9 \\g(x) &= x + 4\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x+4}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = 8x^3 + 28x^2 - 16x + 9$. Evaluate $f(-4)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 130)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = 5x^5 + 8x^4 - 6x^3 + 4x - 3$$

$$q(x) = -x^5 - 5x^3 - 8x^2 - 3x + 7$$

Express the sum of $p(x) + q(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = -3x^2 - 5x - 4$$

$$b(x) = -6x - 9$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^5$ in standard (expanded) form.

Polynomial Operations EXAM (version 130)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= 7x^3 - 24x^2 - 17x - 4 \\g(x) &= x - 4\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x - 4}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = 7x^3 - 24x^2 - 17x - 4$. Evaluate $f(4)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 131)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = 4x^5 + 10x^4 - 2x^2 - 5x - 6$$

$$q(x) = -7x^5 - 5x^3 + 4x^2 - x - 2$$

Express the difference $q(x) - p(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = -8x^2 - 2x + 7$$

$$b(x) = -5x - 3$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^4$ in standard (expanded) form.

Polynomial Operations EXAM (version 131)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= 3x^3 - 19x^2 - 13x - 5 \\g(x) &= x - 7\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x - 7}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = 3x^3 - 19x^2 - 13x - 5$. Evaluate $f(7)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 132)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = 2x^5 + 9x^4 - 6x^3 + 7x - 8$$

$$q(x) = 7x^5 - 2x^4 + 3x^3 - 8x^2 - 1$$

Express the difference $p(x) - q(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = -3x^2 - 5x + 4$$

$$b(x) = 6x + 7$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^5$ in standard (expanded) form.

Polynomial Operations EXAM (version 132)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= -2x^3 - 14x^2 - 21x - 15 \\g(x) &= x + 5\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x+5}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = -2x^3 - 14x^2 - 21x - 15$. Evaluate $f(-5)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 133)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = -4x^5 + 5x^3 + 9x^2 + 7x + 2$$

$$q(x) = 6x^5 - x^4 + 9x^2 - 7x + 10$$

Express the difference $p(x) - q(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = -7x^2 + 3x - 2$$

$$b(x) = 7x + 6$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^5$ in standard (expanded) form.

Polynomial Operations EXAM (version 133)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= 3x^3 - 25x^2 + 10x - 9 \\g(x) &= x - 8\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x - 8}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = 3x^3 - 25x^2 + 10x - 9$. Evaluate $f(8)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 134)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = 10x^5 - 3x^4 + 6x^3 + 4x^2 - 9$$

$$q(x) = -5x^5 - 8x^4 + 7x^2 - 6x + 3$$

Express the difference $p(x) - q(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = 2x^2 - 7x + 4$$

$$b(x) = 6x + 3$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^5$ in standard (expanded) form.

Polynomial Operations EXAM (version 134)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= x^3 + 12x^2 + 27x - 6 \\g(x) &= x + 9\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x + 9}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = x^3 + 12x^2 + 27x - 6$. Evaluate $f(-9)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 135)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = 5x^5 - 2x^3 - 10x^2 - 7x + 6$$

$$q(x) = -4x^5 - 5x^4 + 9x^2 + 2x + 1$$

Express the difference $q(x) - p(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = -4x^2 + 7x + 6$$

$$b(x) = -5x + 2$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^4$ in standard (expanded) form.

Polynomial Operations EXAM (version 135)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= -3x^3 + 14x^2 + 25x - 4 \\g(x) &= x - 6\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x - 6}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = -3x^3 + 14x^2 + 25x - 4$. Evaluate $f(6)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 136)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = -3x^5 - 5x^4 - 9x^3 - 2x^2 - 4$$

$$q(x) = 2x^5 - 9x^3 + 4x^2 + x - 8$$

Express the difference $p(x) - q(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = -6x^2 - 8x - 5$$

$$b(x) = 4x - 6$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^5$ in standard (expanded) form.

Polynomial Operations EXAM (version 136)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= -3x^3 - 25x^2 - 9x - 1 \\g(x) &= x + 8\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x+8}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = -3x^3 - 25x^2 - 9x - 1$. Evaluate $f(-8)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 137)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = 8x^5 - 6x^4 - 7x^3 + 3x - 5$$

$$q(x) = -6x^5 - 5x^4 + 8x^2 - 10x - 7$$

Express the difference $p(x) - q(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = -4x^2 + 7x - 8$$

$$b(x) = 2x - 7$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^5$ in standard (expanded) form.

Polynomial Operations EXAM (version 137)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= 2x^3 + 18x^2 + 28x + 5 \\g(x) &= x + 7\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x+7}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = 2x^3 + 18x^2 + 28x + 5$. Evaluate $f(-7)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 138)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = 10x^5 - 6x^4 - x^2 - 7x + 5$$

$$q(x) = 4x^5 + 10x^4 - 8x^3 - 3x^2 + 5$$

Express the difference $q(x) - p(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = -3x^2 + 2x - 8$$

$$b(x) = -8x - 4$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^4$ in standard (expanded) form.

Polynomial Operations EXAM (version 138)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= 3x^3 + 20x^2 + 16x + 28 \\g(x) &= x + 6\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x+6}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = 3x^3 + 20x^2 + 16x + 28$. Evaluate $f(-6)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 139)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = -4x^5 - 10x^4 - 2x^2 - 9x - 5$$

$$q(x) = -6x^5 + 9x^4 + 4x^3 + 10x - 3$$

Express the sum of $p(x) + q(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = 2x^2 - 5x - 3$$

$$b(x) = -4x - 5$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^4$ in standard (expanded) form.

Polynomial Operations EXAM (version 139)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= -3x^3 + 27x^2 + x - 12 \\g(x) &= x - 9\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x - 9}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = -3x^3 + 27x^2 + x - 12$. Evaluate $f(9)$.

Name: _____ Date: _____

Polynomial Operations EXAM (version 140)

1. Let polynomials $p(x)$ and $q(x)$ be defined below.

$$p(x) = -x^5 + 10x^4 + 3x^3 - 4x - 5$$

$$q(x) = -2x^5 + 3x^3 - 5x^2 - 9x - 8$$

Express the difference $p(x) - q(x)$ in standard form.

2. Let polynomials $a(x)$ and $b(x)$ be defined below.

$$a(x) = 5x^2 + 8x - 9$$

$$b(x) = 5x + 3$$

Express the product $a(x) \cdot b(x)$ in standard form.

3. Express $(x + 1)^6$ in standard (expanded) form.

Polynomial Operations EXAM (version 140)

4. Let polynomials $f(x)$ and $g(x)$ be defined below.

$$\begin{aligned}f(x) &= -6x^3 - 25x^2 - 4x + 1 \\g(x) &= x + 4\end{aligned}$$

The quotient of $\frac{f(x)}{g(x)}$ can be expressed as a polynomial, $h(x)$, and a remainder, R (a real number).

$$\frac{f(x)}{g(x)} = h(x) + \frac{R}{x+4}$$

By using synthetic division or long division, express $h(x)$ in standard form, and find the remainder R .

5. Let polynomial $f(x)$ still be defined as $f(x) = -6x^3 - 25x^2 - 4x + 1$. Evaluate $f(-4)$.